

S31 : Specifications

General Specifications

- 46 busses: 16 x flexi-busses Mono/Stereo (equivalent of 32 DSP busses), Stereo Master (2), Solo busses (2 stereo, 4 total), and 10 x 8 Matrix (8)
- 10 x Control Groups
- 1 x Compressor per channel and buss
- 1 x Gate per channel and buss (switchable to ducker, or compressor with side chain access)
- 16 x assignable 32 band Graphic EQs
- 8 x FX engines (reverbs, delays, w/modulation and enhancer)
- 4 x assignable DiGiTuBes
- 4 x assignable Multiband Comps
- User definable Macros
- An extremely high power headphone amplifier with 1/4 inch and mini jack socket
- 96kHz as standard
- 24 mic line inputs
- 12 analogue outs
- 2 AES I/O (mono)
- Word Clock I/O
- 1 GPI and 1 GPO
- DVI out (for an external monitor)
- 2 DMI Card slots (up to 64 I/O per slot)
- 2 Ethernet connections for Networking
- 2 x 24 segment master/solo meters
- Touch sensitive rotaries with integrated switch & HTL
- 3 x multi-touch screens
- 31 x touch sensitive moving faders
- 4 x layers of banks of 10 faders
- Customisable bank and channel layout
- Snapshots
- Integrated USB2 Audio I/O interface for recording and playback of up to 48 channels 40 x Input flex-channels Mono/Stereo (equivalent of 80 DSP channels)

Audio Specification

- Sample Rate 48kHz, 96kHz
- Processing Delay 2ms Typical @ 48k(60 Stereo Channels, Stage
- Input Through L-R Buss to Stage Output) 1.1ms @ 96kHz
- Internal Processing Up to 40-bit, Floating Point
- A>D & D>A 24-bit Converter Bit Depth
- Frequency Response +/- 0.6dB (20Hz – 20kHz)
- THD <0.05% @ Unity Gain, 10dB Input @ 1kHz
- Channel Separation Better Than 90dB (40Hz – 15kHz)
- Residual Output <90dBu Typical
- Noise (20Hz - 20kHz)
- Microphone Input Better Than -126dB Equivalent Noise
- Maximum Output Level +22dBu
- Maximum Input Level +22dBu

Processing Channel Specification

Input Channel

- Input Name User-Defined
- Channel Selection Mono / Stereo
- Input Routing Main Input
- Analogue Gain -20 to +60dB
- Phase Normal / Reverse
- Digital Trim 40 to +40dB
- Delay 0 - 682ms
- DiGiTuBe Drive 0.01 - 50.0
- Bias 0 - 6
- LPF 20 – 20kHz, 24dB/Oct
- HPF 20 – 20kHz, 24dB/Oct
- Insert A (Pre EQ/Dyn) On/Off
- Equalisation 4 Band EQ: Parametric or Dynamic (Low/Lowshelf, Lower-Mid/Lowshelf, Upper-Mid/Hishelf, Hi/Hishelf)
On/Off
Freq; 20 – 20kHz
Gain; +/- 18dB
Q: 0.1 -20 (Parametric) / 0.10-0.90 (Shelf)
- Dynamics 1 Single or 4 x Multiband (3-Band)
Compressor On/Off
Threshold; -60 – 0dB
Attack; 500us – 100ms
Release; 5ms – 5s
Ratio; 1:1 – 50:1
Gain; 0 to +40dB
Hi Crossover; 20Hz – 20kHz
Lo Crossover; 20Hz – 20kHz
Knee : Hard, Med, Soft
- Dynamics 2 On/Off
Gate / Ducker Threshold; -60 – 0dB
Attack; 50us – 100ms
Hold; 2ms – 2s
Release; 5ms – 5s
Range; 0 - 90dB
Key; Any Source
Key Listen
Freq/Width; 20 – 20kHz
Compressor On/Off
Threshold; -60 – 0dB
Attack; 500us – 100ms
Release; 5ms – 5s
Ratio; 1:1 – 50:1
Gain; 0 to +40dB
Link; Any Channel / Buss
S/C Source : Any Source
S/C Listen : On/Off
S/C Filter Freq/Width: 20Hz – 20kHz
- Insert B (Post EQ/Dyn) On/Off
- Mute Channel Mute

- Solo Solo Buss 1 / Solo Buss 2 / Both,
- Channel Safe Socket Properties, Input Route, Mono/Stereo, Label, Filters, Trim, Delay, Tube, Insert A, EQ, Dyn1, Dyn2, Insert B, Aux, Group Assigns, Pan, Fade, Mute, Direct Outs, Full Safe
- Output Routing Buss,
- Insert A, Insert B,
- Direct: Post-Fade
- Fader 100mm Motorised Fader ∞ to +10dB

Processing Channel Specification

Aux / Group / Matrix Output

- Name User-Defined
 - Phase Normal / Reverse
 - Digital Trim -40 to +40dB
 - Delay 0 - 682ms
 - DiGiTuBe Drive 0.01 - 50.0 Bias 0 - 6
 - LPF 20 – 20kHz, 24dB / Oct
 - HPF 20 – 20kHz, 24dB / Oct
 - Insert A (Pre EQ/Dyn) On/Off
 - Equalisation 4 Band EQ: Parametric or Dynamic (Low/Lowshef, Lower-Mid/Lowshef, Upper-Mid/Hishef, Hi/Hishef)
- On/Off
 Freq; 20 – 20kHz
 Gain; +/- 18dB
 Q: 0.1 -20 (Parametric) / 0.10-0.90 (Shelf)
- Dynamics 1 Single or 4 x Multiband (3-band)
- Compressor On/Off
 Threshold; -60 – 0dB
 Attack; 500us – 100ms
 Release; 5ms – 5s
 Ratio; 1:1 – 50:1
 Gain; 0 to +40dB
 Hi Crossover; 20Hz – 20kHz
 Lo Crossover; 20Hz – 20kHz
 Knee : Hard, Med, Soft
- Gate / Ducker Threshold; -60 – 0dB
- Attack; 50us – 100ms
 Hold; 2ms – 2s
 Release; 5ms – 5s
 Range; 0 - 90dB
 Key; Any Source
 Key Listen
 Freq/Width; 20 – 20kHz
- Compressor On/Off
 Threshold; -60 – 0dB
 Attack; 500us – 100ms
 Release; 5ms – 5s
 Ratio; 1:1 – 50:1
 Gain; 0 to +40dB
 Link; Any Channel/Buss
 S/C Source : Any source
 S/C Listen : On/Off
 S/C Filter Freq/Width: 20Hz – 20kHz
- Insert B (Post EQ/Dyn) On/Off
 - Mute Channel Mute
 - Solo Solo Buss 1 / Solo Buss 2 / Both,
 - Channel Safe Mono/Stereo, Bus Mode, Label, Filters, Trim, Delay, Tube, Insert A, EQ, Dyn1, Dyn2, Insert B, Group Assigns, Fade, Mute, Direct Outs, Full Safe
 - Output Routing Outputs, Insert A, Insert B
 - Fader 100mm Motorised Fader ∞ to + 10dB